### **APPENDIX A**

### GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID # MW-5



\_ Type: \_\_\_\_

No. of Containers: \_\_\_\_\_ No. of Containers: \_\_\_\_\_

Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Diamond Bar, CA 91765 Project No: 04-4428.10 Telephone: (909) 396-7662 Navy Contract No.: N68711-01-D-6008, D.O. No. 0001 Fax: (909) 396-1455 Sampled By: Dale Erbes and J. Robinson Date: 8/25/03 Weather: Hot and Sunny PURGE VOLUME CALCULATION (casing volume): <u>66.39</u>) X 144.16 Gallons WL (feet) D (inches) Calculated Purge Volume TD (feet) **PURGE METHOD PUMP INTAKE SETTING** Bailer – Type: X Pump – Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Dissolved Total Conductivity Turbidity ORP Time Water Discharge рΗ Oxygen Temp Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 0958 7.79 37.8 80.0 20.80 66.39 0.0 10.56 186 7.80 2.9 1013 30 36.9 10.62 20.33 192 1028 60 7.45 37.6 1.5 9.40 19.85 192 1043 90 7.84 37.8 1.5 10.54 20.33 191 1058 120 7.52 0.99 2.8 11.59 19.34 258 66.20 7.58 37.4 1113 150 1.8 9.19 23.90 183 Total Purge Volume: 150 (Gallons) Total Discharge: 3.00 \_ (Casing Volumes) Approx. Purge Rate: 2.0 (GPM) **OBSERVATIONS DURING PUMPING** NOTES: (well condition, color, clarity, odor): Purge time start: 0958; brownish in color w/ no odor @ 1st interval; clear and odorless for the remainder intervals; control box: 381 **RECHARGE BEHAVIOR:** X Fast recharging Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: Polytank Purge water disposal: \_\_\_\_\_150\_\_\_\_ WELL SAMPLING Sample Depth in feet (BTOC): Original Duplicate Blank Other ( Trip / Source /

**ORIGINAL FIELD RECORD** 

 Sample Time:
 1117
 Sample Time:
 Sample ID:
 Sample ID:

 No. of Containers:
 3+1+1
 No. of Containers:
 Sample Time:
 Sample Time:

\_\_ Type: \_\_\_

Sample ID: \_\_\_\_\_ Sample ID: \_\_\_\_

### GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID # MW-6



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Diamond Bar, CA 91765 04-4428.10 Project No: Telephone: (909) 396-7662 Navy Contract No.: N68711-01-D-6008, D.O. No. 0001 Fax: (909) 396-1455 Dale Erbes and J. Robinson Sampled By: Date: 8/27/03 Cool and Sunny\_\_\_\_ Weather: PURGE VOLUME CALCULATION (casing volume): 179.30 ) X 4<sup>2</sup> D (inches) Gallons Calculated Purge Volume **PURGE METHOD PUMP INTAKE SETTING** Bailer – Type: X Pump – Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Dissolved Total Conductivity Turbidity Time Water Discharge рΗ Oxygen Temp **ORP** Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 0748 128.67 99.7 22.2 9.39 20.20 0 6.85 139 24 24.1 8.90 0800 6.91 96.6 20.85 137 0812 48 6.93 96.3 5.69 8.87 20.93 137 0824 62 6.97 95.0 7.31 8.84 21.21 136 0836 84 6.98 96.4 2.85 9.01 21.56 137 7.03 21.76 0848 108 96.3 1.59 10.01 136 0900 128.55 132 7.08 97.1 8.77 21.93 130 1.11 Total Purge Volume: (Gallons) Total Discharge: 3.00 (Casing Volumes) Approx. Purge Rate: 2.0 (GPM) **OBSERVATIONS DURING PUMPING** NOTES: (well condition, color, clarity, odor): Purge start: 0748; brownish and odorless for 1st and 2nd intervals; the remainder clear and odorless; control box: 333 **RECHARGE BEHAVIOR:** X Fast recharging Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: Polytank Purge water disposal: \_\_\_\_\_140\_\_\_ WELL SAMPLING Sample Depth in feet (BTOC): \_\_\_\_\_ Original MS/MSD Blank Other ( Trip / Source / Sample ID: \_\_\_\_ MW-6 Sample ID: \_ Type: \_\_\_\_\_ \_\_ Type: \_\_\_

**ORIGINAL FIELD RECORD** 

No. of Containers: \_\_\_\_\_ No. of Containers: \_\_\_\_\_

Sample Time: 0906 Sample Time: Sample ID: Sample ID: Sample ID: Sample ID: Sample ID: Sample Time:

### GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID # MW-7



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Diamond Bar, CA 91765 Project No: 04-4428.10 Telephone: (909) 396-7662 Navy Contract No.: N68711-01-D-6008, D.O. No. 0001 Fax: (909) 396-1455 Sampled By: Dale Erbes and J. Robinson Date: 8/26/03 Warm and Sunny\_\_\_\_\_ Weather: PURGE VOLUME CALCULATION (casing volume): 205.8 ) X 4<sup>2</sup> D (inches) Gallons Calculated Purge Volume **PURGE METHOD PUMP INTAKE SETTING** Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_ Bailer – Type: FIELD PARAMETER MEASUREMENT Dissolved Depth to Total Oxygen Time Water Discharge рΗ Conductivity **Turbidity** Temp **ORP** Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 9.09 1013 135.52 0.0 7.08 46.6 0.08 23.63 170 22.5 7.20 9.43 1028 46.1 0.00 23.47 156 1043 45.0 7.28 45.8 2.43 9.30 24.00 155 1058 67.5 7.33 46.6 0.11 10.05 23.07 154 1113 90 7.35 46.2 0.20 9.65 23.62 153 7.34 9.76 1128 112.5 46.5 0.36 23.83 153 1143 135.02 0.00 9.48 25.53 153 135.0 7.33 46.1 Total Purge Volume: 140 (Gallons) 3.00 (Casing Volumes) Total Discharge: 1.5 (GPM) Approx. Purge Rate: **OBSERVATIONS DURING PUMPING** NOTES: (well condition, color, clarity, odor): Purge Start: 1013; clear and odorless; control box: 352 **RECHARGE BEHAVIOR:** X Fast recharging Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: Polytank Purge water disposal: 140 WELL SAMPLING Sample Depth in feet (BTOC): Original MS/MSD Additional Sampling Other Sample ID: MW-7 Sample ID: Type: Type:

**ORIGINAL FIELD RECORD** 

Sample ID:

Sample Time: \_\_\_\_

No. of Containers:

Sample ID:

Sample Time:\_\_\_\_\_

No. of Containers: \_\_\_\_\_

Sample Time: \_\_\_\_\_ Sample Time: \_\_\_\_\_

No. of Containers: 3+1+1 No. of Containers: \_\_\_\_\_

### GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID # MW-8



Other ( Trip / Source /

\_\_ Type: \_\_\_\_\_

No. of Containers: \_\_\_\_\_ No. of Containers: \_\_\_\_\_

Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Diamond Bar, CA 91765 Project No: 04-4428.10 Telephone: (909) 396-7662 Navy Contract No.: <u>N68711-01-D-6008, D.O. No. 00</u>01 Fax: (909) 396-1455 Dale Erbes and J. Robinson Sampled By: Date: 8/25/03 Warm and Sunny\_\_\_\_\_ Weather: PURGE VOLUME CALCULATION (casing volume): Gallons Calculated Purge Volume **PURGE METHOD PUMP INTAKE SETTING** Bailer – Type: \_\_\_\_\_ X Pump – Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Dissolved Total Turbidity ORP Time Water Discharge рΗ Conductivity Oxygen Temp Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 0822 7.18 4.9 11.43 19.45 131.88 0 46.6 202 7.27 208 0842 50 44.5 0.65 11.79 19.52 0902 43.3 9.26 220 100 7.10 0.00 21.19 10.70 0922 150 7.42 44.2 0.00 20.90 202 0930 131.75 170 7.33 44.3 0.00 10.13 19.63 207 Total Purge Volume: 170 (Gallons) Total Discharge: 3.00 (Casing Volumes) 2.5\_\_\_ (GPM) Approx. Purge Rate: **OBSERVATIONS DURING PUMPING** NOTES: (well condition, color, clarity, odor): Purge Start: 0822; clear and odorless; control box; 350 **RECHARGE BEHAVIOR:** X Fast recharging Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: Polytank \_ Purge water disposal: \_\_\_\_150\_ **WELL SAMPLING** Sample Depth in feet (BTOC): \_\_\_\_\_

**ORIGINAL FIELD RECORD** 

\_\_\_\_\_ Type: \_\_\_

 Sample Time:
 0934
 Sample Time:
 Sample ID:
 Sample ID:

 No. of Containers:
 3+1+1
 No. of Containers:
 Sample Time:
 Sample Time:

Blank

**Duplicate** 

MW-8 Sample ID:

**Original** 

Sample ID: \_\_\_\_

### **GROUNDWATER COLLECTION AND SAMPLE LOG** WELL ID # MW-10



Other ( Trip / Source /

No. of Containers: \_\_\_\_\_ No. of Containers: \_\_\_\_\_

Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Diamond Bar, CA 91765 Project No: 04-4428.10 Telephone: (909) 396-7662 Navy Contract No.: N68711-01-D-6008, D.O. No. 0001 Fax: (909) 396-1455 Dale Erbes and J. Robinson Sampled By: Date: 8/25/03 Weather: Cool and Clear PURGE VOLUME CALCULATION (casing volume): Gallons Calculated Purge Volume **PURGE METHOD PUMP INTAKE SETTING** Bailer – Type: X Pump – Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Dissolved Total Conductivity Turbidity Time Water Discharge рΗ Oxygen Temp **ORP** Comments (NTU) (Feet) (Gallons) (mS/cm) (mg/L) (° C) (mV) 0.00 90.7 14.0 20.27 Non-calibrated Horiba V-22 0658 81.97 6.12 8.68 283 22.5 98.7 280 0707 5.77 10.0 8.02 19.57 Non-calibrated Horiba V-22 277 Non-calibrated Horiba V-22 0716 45.0 5.80 91.7 0.908.58 19.89 0725 67.5 5.00 0.99 0.60 9.08 20.14 378 Calibrated Horiba V-22 0734 90.0 6.02 0.1 0.00 9.11 19.94 244 Calibrated Horiba V-22 0743 81.88 9.29 327 Calibrated Horiba V-22 112.5 6.17 0.1 0.45 19.70 Total Purge Volume: 112.5 (Gallons) Total Discharge: 3.00 (Casing Volumes) 2.5 \_\_ (GPM) Approx. Purge Rate: **OBSERVATIONS DURING PUMPING** NOTES: (well condition, color, clarity, odor): Purge Start: 0658; clear and odorless; control box: 288 **RECHARGE BEHAVIOR:** X Fast recharging Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: Polytank Purge water disposal: \_\_\_\_\_115\_\_\_ **WELL SAMPLING** Sample Depth in feet (BTOC):

**ORIGINAL FIELD RECORD** 

\_\_\_\_\_ Type: \_\_\_\_ Sample Time: \_\_\_\_\_\_ Sample Time: \_\_\_\_\_ Sample ID: \_\_\_\_\_\_ Sample ID: \_\_\_\_\_\_ No. of Containers: 3+1+1 No. of Containers: Sample Time: Sample Time:

Blank

**Duplicate** 

Sample ID: MW-10 Sample ID:

**Original** 

### **GROUNDWATER COLLECTION AND SAMPLE LOG** WELL ID # MW-13



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Diamond Bar, CA 91765 04-4428.10 Project No: Telephone: (909) 396-7662 Navy Contract No.: <u>N68711-01-D-6008, D.O. No. 00</u>01 Fax: (909) 396-1455 Dale Erbes and J. Robinson Sampled By: Date: 8/26/03 Cool and Sunny\_\_\_\_ Weather: PURGE VOLUME CALCULATION (casing volume): 115.76 175.89 ) X 4<sup>2</sup> D (inches) Gallons Calculated Purge Volume **PURGE METHOD PUMP INTAKE SETTING** Bailer – Type: X Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_ FIELD PARAMETER MEASUREMENT Depth to Dissolved Total Turbidity ORP Time Water Discharge рΗ Conductivity Oxygen Temp Comments (NTU) (Feet) (Gallons) (mS/cm) (mg/L) (° C) (mV) 175.89 4.0 21.56 0648 0.0 5.44 68.4 8.58 185 22.5 21.79 0658 5.88 59.6 1.3 9.13 175 0708 21.54 174 45.0 6.19 58.7 0.10 8.85 21.59 0718 67.5 6.30 58.7 0.00 9.07 176 0728 90.0 6.45 57.1 0.30 8.80 21.69 172 175.75 0738 112.5 6.66 58.9 0.05 8.88 21.60 166 Total Purge Volume: 115 (Gallons) Total Discharge: 3.00 (Casing Volumes) 2.25 (GPM) Approx. Purge Rate: **OBSERVATIONS DURING PUMPING** NOTES: (well condition, color, clarity, odor): Begin Purge: 0648; clear and odorless; control box: 346 **RECHARGE BEHAVIOR:** X Fast recharging Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: Polytank Purge water disposal: \_\_\_\_\_ \_120\_\_ **WELL SAMPLING** Sample Depth in feet (BTOC): Other ( Trip / Source / **Duplicate** Blank **Original** 

**ORIGINAL FIELD RECORD** 

No. of Containers: \_\_\_\_\_ No. of Containers: \_\_\_\_\_

Type: \_\_\_\_ Sample Time: \_\_\_\_\_\_ Sample Time: \_\_\_\_\_ Sample ID: \_\_\_\_\_\_ Sample ID: \_\_\_\_\_\_ No. of Containers: 3+1+1 No. of Containers: Sample Time: Sample Time:

MW-13 \_\_\_\_ Sample ID: \_\_\_

Sample ID: \_\_\_\_\_

### GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID # MW-15



\_\_ Type: \_\_\_\_

0729\_\_\_\_\_ Sample ID: \_\_\_\_\_ Sample ID: \_\_\_\_\_

\_\_\_\_\_ Sample Time: \_\_\_\_\_ Sample Time: \_\_\_\_\_

No. of Containers: \_\_\_\_\_ No. of Containers: \_\_\_\_\_

Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Diamond Bar, CA 91765 Project No: 04-4428.10 Telephone: (909) 396-7662 Navy Contract No.: <u>N68711-01-D-6008, D.O. No. 00</u>01 Fax: (909) 396-1455 Dale Erbes and J. Robinson Sampled By: Date: 8/27/03 Cool and Cloudy\_\_\_\_\_ Weather: PURGE VOLUME CALCULATION (casing volume): Gallons Calculated Purge Volume **PURGE METHOD PUMP INTAKE SETTING** Bailer – Type: X Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_ FIELD PARAMETER MEASUREMENT Depth to Dissolved Total Conductivity Turbidity ORP Time Water Discharge рΗ Oxygen Temp Comments (Gallons) (NTU) (Feet) (mS/cm) (mg/L) (° C) (mV) 0 52.2 19.0 17.05 0650 67.55 6.57 6.61 112 51.3 0656 13.5 14.6 7.67 16.74 111 6.68 0702 27.0 6.86 51.8 10.01 7.81 16.75 112 0708 40.5 6.94 51.9 5.03 8.01 16.63 114 0714 54.0 7.01 49.6 3.14 8.02 16.59 117 0720 67.50 7.06 67.5 51.8 1.56 10.24 16.78 120 Total Purge Volume: 68.0 (Gallons) Total Discharge: 3.00 (Casing Volumes) 2.25 (GPM) Approx. Purge Rate: **OBSERVATIONS DURING PUMPING** NOTES: (well condition, color, clarity, odor): Purge Start: 0650; clear and odorless; control box: 215 **RECHARGE BEHAVIOR:** X Fast recharging Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: Polytank Purge water disposal: \_\_\_\_70\_ **WELL SAMPLING** Sample Depth in feet (BTOC): Other ( Trip / Source / Blank **Original Duplicate** 

**ORIGINAL FIELD RECORD** 

Dupe-6-3-Q03\_\_\_\_\_ Type: \_\_\_

MW-15 Sample ID:

Sample Time: 0723 Sample Time:

No. of Containers: 1+1 No. of Containers:

Sample ID: \_\_\_\_\_

### GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID # MW-16



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Diamond Bar, CA 91765 Project No: 04-4428.10 Telephone: (909) 396-7662 Navy Contract No.: <u>N68711-01-D-6008, D.O. No. 00</u>01 Fax: (909) 396-1455 Sampled By: Dale Erbes and J. Robinson Date: 8/26/03 Cool and Sunny\_\_\_\_ Weather: PURGE VOLUME CALCULATION (casing volume): 109.96 228.85 ) X 4<sup>2</sup> D (inches) Gallons Calculated Purge Volume **PURGE METHOD PUMP INTAKE SETTING** Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_ Bailer – Type: FIELD PARAMETER MEASUREMENT Dissolved Depth to Total Time Water Discharge рΗ Conductivity **Turbidity** Oxygen Temp Salinity Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (%) 0805 109.96 48.8 2.9 22.93 0 6.93 8.86 156 22.87 0819 21.0 6.98 46.1 0.05 9.05 156 0833 42.0 6.98 48.0 0.00 9.03 23.03 156 0847 63.0 7.00 47.6 0.00 9.04 22.88 156 0901 84.0 7.01 48.8 0.20 9.80 22.90 157 7.02 8.68 0915 105.0 48.1 0.20 23.53 156 Total Purge Volume: 110 (Gallons) \_\_\_\_3.00 (Casing Volumes) Total Discharge: 1.5 (GPM) Approx. Purge Rate: **OBSERVATIONS DURING PUMPING** NOTES: (well condition, color, clarity, odor): Purge Start: 0805; clear and odorless; control box: 376 **RECHARGE BEHAVIOR:** X Fast recharging Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: Polytank Purge water disposal: \_\_\_\_\_ \_\_115\_\_\_ **WELL SAMPLING** 

Sample Depth in feet (BTOC): \_\_\_\_\_

**ORIGINAL FIELD RECORD** 



Multi-Port Well Field Data Sheet

1

Well ID: Mw - 21
Sampling Zone No.: 5/4/5/2//
Depth (ft): 372/3το/2 4ο//6

Beginning of Session: 14.16 End of Session: 14.14

Water Pressure Inside Casing:

Contract #: N68711-01-D-6008 Delivery Order #: 0001

JPL Pasadena

Start Time: 1030 Finish Time: 1400

Date: 7.29.03 Page: 10F1

1**620** Date 1**400** Page

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Si	Cond (mmhos)	727	2 · · · · · · · · · · · · · · · · · · ·	7.07	71.2	630													
Water Quality Parameters	Temp. (oC)	27.63	2.7	35.52	15/12	25												1	
Quality	Turb. (NTU)	1.17	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	2.59	5:0	0.13													
Wate	Ŧ	7 10	100	7	55	7													
	Time	2511	1121	4421	1321	1350													
	Pressure in MP	130.30	14.241	7255 1244 / CHO. 59 24.66, 24 1 121	38.62	14.17													
	Shoe	1	/	>	1	>			Ī						T	1		T	T
ks	Close	>	\	>	>	>									2			T	
Sample Collection Checks	Zone	153.49	126.65	46.83	62.79	31.65													
e Colle	Open Valve		<b>\</b>	>	7	>											T		
Sampl	Zone	153.46	126.62	96.83	62.74	31.74													
	Shoe	>	7		7	/			İ									T	<b>†</b>
	Pressure in MP	12051	10/.18	72.53	28.60	14,14													
	Arm	<b>\</b>	7	/	7	7			T	1								T	
Position Sampler	Deactivate Set Arm Locate Port	,	7	1	^														
	Arm	7	/		\	7				†	_		-				$\vdash$	T	T
	Shoe	>	/	7	7	7													
ecks			1/	\	>	7													
Surface Function Checks	Evacuate Valve Container Closed	,	<b>,</b>	>		7						į							
Surface	Valve	7	>	>	3	7													
	Vacuum Check Valve Closed		,	>		7													
	Shoe	\ \	>	7	>	7													
	Port Run ##		-	4	-														
	Port #	12	7	M	.7														

Total Volume:

NO CHOR

LLEAR.

PORT 4:

NO OF OR

PORTS: LLEAR

Notes:

PORT 3:

Pott

ND OBOR

YELLOWISH BROWN,



# **Groundwater Sampling**

Multi-Port Well Field Data Sheet

Depth (ft): 448/ 444/ 342/ 344/ 242 61 -MW 12/2/14/5 Well ID: Sampling Zone No.:

14.13 End of Session: Beginning of Session:

Water Pressure Inside Casing:

Contract #: N68711-01-D-6008

JPL Pasadena

Delivery Order #: 0001

Start Time: 645

Finish Time:

Date:

90.073 SR.H 10759 6.07 000 20.69 48.3 (mmhos) Cond 12883 Water Quality Parameters Temp. (oC) 33.93082312.41 24.4 22.18 80.7047. 34.54 51.34 21.13 Turb. (NTU) 14.30 09036.99 4.19 Time PH Pressure in MP Shoe <u>\_\_</u> Close Valve ASK Sample Collection Checks \$5.02/ Zone Open Zone Pressure Valve Pressure 55.89 86.56 165.91 76.52 0 165.88 120.58 142.53 55.82 86.56 Shoe ort 14.24 81 ) 14.30 1 39.08 57.50 35.92 Pressure in MP Arm out Locate Port Deactivate Position Sampler Set Arm NS  $\frac{7}{8}$ Shoe Arm in In ) 7 7 7 Valve Open | Container | Closed Surface Function Checks Valve Evacuate 7 Check Valve Vacuum Closed 7 Shoe Out Port Run # 0

Notes: [OPT 5: Clica + Ortonlio

PORT 3: " " 1) PORT 2

4 Oratours PORT 4: Clear



Multi-Port Well Field Data Sheet

Well ID: Hw-3

Sampling Zone No.:

Depth (ft): Beginning of Session: End of Session:

Water Pressure Inside Casing:

Contract #: N68711-01-D-6008 Delivery Order #: 0001

JPL Pasadena

Date: 2/35/63 Page: 10,1

Start Time: 0945 Finish Time: 1050

		7%	• ^	? ^ ? ^	J																		
ers	Cond (mmhos)		ı	-10	N																		
Water Quality Parameters	Temp. (oC)	104.0457 20 R	2 /2	11 15 17 10 6 05 000 00 1	3			İ			1												
Quality	Turb. (NTU)	10%	000	18	٥٠٠٢				Ī		1							1			_		
Water	Ŧ	100	6,0	3 5																			
	Time	00	200	\$		-											Ī	ľ	1				
	Pressure in MP	10000 2, 251	6,00,000	3 2		-	+										Ī				1		
	Shoe	7		/	$\dagger$			+	+	t					-	$\vdash$		t	†	1	1	-	$\vdash$
S	Close	7	7	7		-	1			T	1			-				T	Ī		1		
Sample Collection Checks	Zone	01.112	12/2/	2 2				1			1				j				$\downarrow$				
e Collec		1	7	7	$\dagger$	$\dagger$	1	$\dagger$	Ť	1						0		1	4				-
Sample	Zone Open Pressure Valve	211.18	12. 27	100			T					1	\			7	\		1				
	Shoe	7	7	7		l					†					6		+	$\dagger$				
	Pressure in MP	11.621	74 77	14.29											1								
	Arm	/	1	K													1			1	$\ $		
Position Sampler	Deactivate Set Arm Locate Port	7	7	7																1			
	Arm In	7	1	7					-	$\vdash$	t	†	7		_				t	t	7	7	$\exists$
	Shoe	7	7	7	-							1								T	1		
ecks		7	7	7			<del> </del>					1									1	1	
Surface Function Checks	Valve Evacuate Valve Open Container Closed	7	1	7																			
Surface		7	7	7																Ţ			
"	Vacuum Check Valve Closed	7	/	7																			
	Shoe	7	7	7								<u> </u>	7								1	+	
	Port Run # #			_																			
	Port	<b>5</b> ~	٧.	1									T	T		Ī					T	Ī	1

PORT 4; Clean & coloules

Poper 3: Clear + rotter egg colos

Total Volume:

Port



Multi-Port Well Field Data Sheet

Well ID: MU -Sampling Zone No.: Depth (ft):

Beginning of Session: \_ End of Session: \_

Water Pressure Inside Casing:

Contract #: N68711-01-D-6008 Delivery Order #: 0001

JPL Pasadena

Date: 7/36/03 Page: /e//

Start Time: ///3 Finish Time: /2/8

		× ×	. ~	<u>፣</u> ⁄	<u>,                                     </u>																
SIS	Cond (mmhos)	2	, li	-																	
Water Quality Parameters	Temp. (oC)	20.00	0 5/2 08 16 7 1/1 CDC 02/1	12097637 30 23.25									Ī							T	$\uparrow$
Quality F	Turb. (NTU)	٥ م	1 2	30,7				†			1	T		$\dagger$	$\dagger$		-		†		$\parallel$
Water	품	100	100	, e3			Ť			1	T	Ť	1			$\top$	T	Ť	1	$\dagger$	$\parallel$
	Time	1175	3 3	1289						1		1						Ī	Ť	1	$\parallel$
	Pressure in MP	25 11 20 11 11 12 12 11 12 12 12 12 12 12 12 12	2 14						i												
	Shoe	7	-	$\overline{}$	_	-	┢	ŀ		$\dagger$	+	+					$\mid$	+		$\dagger$	$\parallel$
S	Close Valve	7	7	1								T								<u> </u>	<u> </u>
Sample Collection Checks	Zone	19.72	127 %	0883																	
le Colle	Open Valve	7	7	7												M.					
Samp	Zone Open Pressure Valve	178.74	127.49	88.85										1		0					$\prod$
	Shoe	7	7	7										,		7.5					$\parallel$
	Pressure in MP	104.65	55.35	1425											1	1					
	Arm	1	1	7																T	
Position Sampler	Deactivate Set Arm Locate Port	7	)	7																	
	Arm	7	7	7	1														Γ	$\vdash$	4
	Shoe	1	7	7																	
necks		7	7	7																	
Surface Function Checks	Valve Evacuate Valve Open Container Closed	7	7	7																	
Surface	Valve Open	7	7	2																	
"	Vacuum Check Valve Closed	7	)	7	$\prod$																
	Shoe	7	7	7																7	
	# #			$\exists$	$\prod$																
	Port	7	M	7	1																

Cher + Adollos Notes:



Multi-Port Well Field Data Sheet

Well ID: 16-20

Sampling Zone No.: <u>5/4/8/2//</u> Depth (ft): <del>902/20</del>/26.

Beginning of Session: 74.74 End of Session: 77. 25

Water Pressure Inside Casing:

Contract #: N68711-01-D-6008 Delivery Order #: 0001

JPL Pasadena

Date: 2/3/ Page: /@

		ا	۵.	\s\ \s\ \	×	1	3~	20	۷ ^_	~													•
2.0	Cond (mmhos)		4.35 32.3	بر وي	24100	P 1		J	6%.0	58.0											1		
Water Quality Parameters	Temp.	27 10	7.7	7		7,07	27.70	14.00	2267	1,30/6681.02 1.02 25.76					1								
Ouality	Turb.	3	0.5	5.0	3	9 6	3 8	3	0.12	7.05	-			1								_	
Water	H	3	Ž,	<u> </u>	) e	\$ % \$ \	100	શ ક		8													
	Time	6	300	2/0	۶ ۱	2 2	)   	2/2	600	1001													
	Shoe Pressure In in MP	176	204. 7. COOK 1. O. C.	10. 57 0/5/6/6 10.35 65.11 50.5	200	157.25 40/1 70 05/20 16 51	100	7. Co (4.8% 0.0) 8.4.1.6.1.6.2.1.6.1	1000 C1 160 6.10 0.12 2267 64.8	83													
		\	7 7		§ \	1	/	1	Ì	7													
s s	Close Valve	1	1		<u> </u>	7		\\	1	1													
Sample Collection Checks	Zone Pressure	20 70	200.79	1000	240.4 1 27 CF 139 C 20 CF 20 C	11.11.11	2	٠L	200	27.72													
e Collec	Open Valve	7	1	1	1	1	1		7	1				-		t	†	1	1	1	7	Ħ	
Samp	Zone	7 63	7 25.55	68 14	2446	7 200	25.62		20.00	3													
	Shoe	7	7	7	7	7	7	7	. \								1	1	7	1	$\parallel$	1	
	Pressure in MP	57.47	20.60	718 44	27.72	156.98	10.05	83.12	(e)	1	1								7	S	$\parallel$	<u> </u>	
	Arm	7	7	7	7	7	7	7	7				_				<u> </u>		4	7	1	†	
Position Sampler	Deactivate Set Arm Locate Port	7	3	7	7	7	7	1	1														
	Arm	2	S	1	7	7	7	7	7				_				r		*	1	$\dagger$	٣	
	Shoe	7	7	7	7	7	7	1	1												V	$\int$	
hecks	Valve	7	7	7	7	7	7	7	1														`
Surface Function Checks	Valve Evacuate Valve Open Container Closed	1	1	7	7	7	7	7	7														
Surface	Valve	7	1	7	7	7	7	1	7												T	T	1
	Vacuum Check Valve Closed	7	7	7	7	7	7	7	7														7
	Shoe Out	7	7	7	7	7	7	7	7														
	Port Run # #	-		7	7	7	1	-		4	-	+	-		_				_		igert	-	$\frac{1}{2}$
	<u>ሮ</u> #	4)	<u> </u>	Ž		Ä	7	7	_	- 1		$\perp$	_[										



Multi-Port Well Field Data Sheet

Well ID:

Depth (ff): 684, 564, 424, 330, 25, Finish Time: 074/ f Session: 74.16 HW-18 5-4-5-2-+" Sampling Zone No.: Beginning of Session:

72.71

End of Session:

Water Pressure Inside Casing:

Contract #: N68711-01-D-6008

JPL Pasadena

Delivery Order #: 0001

りへ 27 ペ ヘ ヘ 106.11 0824 (3 34.7 22.45 25.73 (mmhos) Cond 22.45 52.7 159.81 0755 3.71 0.75 22.95 31.0 Water Quality Parameters Temp. (oC) 18.12 65.14 55.70180 33.21 Turb. (NTU) 46.67 0847 2.8 0.00 표 Time Pressure in MP Close Shoe I Sample Collection Checks J 8, 20 Zone Open Zone Pressure Valve Pressure 25.62 156.02 57.43 0 156.02 97.8 20.8 57.57 Out Shoe 9 106.04 1 25.27 Arm | Pressure 158:01 160.00 45.80 in MP out Locate Port Deactivate Set Arm Position Sampler ⊆ 7 Shoe .⊑ Open | Container | Closed Valve | Evacuate | Valve Surface Function Checks 7 7 Check Valve Vacuum Closed Shoe Out 1 Port Run # # 40 MU

Part 7: Clear + odal va

Total Volume:

Clien + Octobles POX 5: Clearns ada Post 3:

Notes:



### JPL Pasadena

Contract #: N68711-01-D-6008 Delivery Order #: 0001 Water Pressure Inside Casing:

Multi-Port Well Field Data Sheet **Groundwater Sampling** 

Well ID: HO-7 Sampling Zone No.:স্থ Depth (ft): ই

Beginning of Session: End of Session:

Start Time: 0945 Finish Time: //

Date: <u>8/4/</u> Page: <u>/</u> <mark>94</mark>

		•	7	丿	~	$\overline{\wedge}$	-																	
ی	Cond (mmhos)		0.10	87.1	200	48.5	i																	
Water Quality Parameters	Temp.		2.30/07/12/43.0/25.16 0.10	27.72	17.41 1049 688120 23.49 90.7	14.66/10 5/1.85 2.9 24.54	14.72			$\dagger$	1						$\dagger$	1	1				$\dagger$	
Suality F	Turb. (NTU)	!	5	3.5	0.7	2	5.2			$\dagger$	+					-		1	1			_		1
Water (	H	- 2	77	389	3	26.7	57.5			$\dagger$	$\dagger$						$\dagger$	+	1		_	$\vdash$		Ħ
	Time	1	1001	1201	700	3/6	73 "										T	T						
	Pressure in MP	J	07.70	000	7,6	12.56/15 56.95 2.9	01.1																	
	Shoe Pr	-	\ \ \	\ \ \ \ \ \	┪.	77					1	+	+				<u> </u> 	+	+					1
	lose	+	7 /	7,	7	1/2	+	1		l	+	+					$\mid$	+	+			<u> </u>		
Sample Collection Checks	Zone C	-	+	-	2000	10001	7	1		-	l	1	+	-		-	$\vdash$	+	+	$\dashv$		_	H	
llection	n Zo e Pres	119		27.50	7	12	7	_		L	1	1	-			L		ļ	-					
nple Co	Open Valve	-   -	7/7	7 7	1 2	7 7	1	4			-	$\downarrow$	-	_		1	_	-	+					
Sar	Zone Pressure	119 00	150	81.50	50.00	27 20										7.0								
	Shoe	1	1	1	1	7 /			\						1	8								
	Pressure in MP	125.62	20.00	100	27.72	61.51								1	1									
	Arm	1	7	7	7	7					Γ		mathrewise				-					7		
Position Sampler	Deactivate Set Arm Locate Port	7	7	7	7	7																		
	Arm	Z	7	7	7	7		1												1				
	Shoe	7	7	7	7	7													L			1		
hecks	Valve	7	7	7	7	7																		
Surface Function Checks	Evacuate Valve Container Closed	7	7	7	7	7																		
Surface	Valve Open	7	7	)	7	7																		
	Vacuum Check Valve Closed	7	7	7	7	1																		•
	Shoe	7	7	7	7	7	Ц																	
	Run #	7	-	2		7		L																
	Port #	W	7	2	-	1			$\int$	_[						T				Γ	T	T		
			7	10 m	<u></u>	/ 5															•			
						^																		

Total Volume:

brounist exillos; odos

Notes:



Multi-Port Well Field Data Sheet

Well ID: MW-23

Sampling Zone No.: 4 Depth (ft): Beginning of Session:

End of Session: 14

Water Pressure Inside Casing:

Vacuum Check Valve Closed

Shoe Out

Port Run

7

Contract #: N68711-01-D-6008 Delivery Order #: 0001

JPL Pasadena

Date: 8/6/03
Page: 104/

 $(\infty)$ 

Start Time:  $\frac{07/2}{13/97}$ 251/174 Finish Time:  $\frac{083c}{13}$ 

				3	٠ ر د	s N	2	$\stackrel{>}{\sim}$												
	ars	Cond	(soyum)	0			87.1	ò											T	
	Water Quality Parameters	Temp.	(NTU) (oC)	,	17:10	300	% %	21.15		T			1					1	1	1
	Quality F	Turb.	(NTU)	(	8 2	8	9.0	4.6		$\dagger$		_	1	1				ì	†	+
	Water	2	E	100	2	75.5	3	6.83		Ť	1		+	Ť	1			t	$\dagger$	7
		(	ש ב	8	0/0	200	2000	22.50			1			T					1	1
		Shoe Pressure	in MP	6	1.10 840/41 0.50 11.10 33 B	7 1/2.6 JON J6.57 6. 80 20.64 36.76	07:07 00076.68 O.Co 20.78 87.	47.30 08226.83 4.6 21.15												
		Shoe	드	1	7 /	1		7							1				1	1
	S		Valve	1	1	1	7 7								1				T	1
(	sample Collection Checks	Zone	Pressure	10001	2000	0.00/ 0/ 0/ 08	1000	25.2				\								<b>T</b>
	e Colle	Open	Valve	7	. [	1	7   1		1		Ī			V	J					1
2	Samp	Zone	Pressure Valve Pressure	11.200	1004	2/2/2	00/2										\			ţ
		Shoe	j Š	7	7	1/	1	1			Ī									
		Pressure Shoe	16.99 16.99	12	111.95	82.22	1/92/20	20.11												
		Arm	ont	7	1	/										1				
Position	Sampler	Deactivate Set Arm	Locate Port	7	7	7	7													
		Arm	=	Z	7	7	7	T	1			1			T	†			-	T
		Shoe		7	1	1	7													
hecks		Valve	7000	1	7	7	1													
Surface Function Checks		Valve Evacuate Valve Shoe Arm		7	7	7	7													
urface		Valve		7	7	1	1													
(1)	Ţ	Eva	. 7					П	Ť			Ť		$\exists$	_	T	7	$\exists$	_	_

Notes: POL

Port 3. Clean & Edgless



JPL Pasadena

Contract #: N68711-01-D-6008 Delivery Order #: 0001

Water Pressure Inside Casing:

# **Groundwater Sampling**

Multi-Port Well Field Data Sheet

Well ID: HW- 29 Sampling Zone No:(/3//3/) Depth (ft): 55%

Beginning of Session: End of Session:

Date: **8/6/** Page: **/ 0//** 

Start Time: 0906 Finish Time: //

Port Run   Face Function Checks   Position   Sample Collection Checks   Position   Sample Collection Checks   Position   Sample   Passarie   Position			*	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ν ν		7	~											
Port Run   Vacuum	Sis	Cond (mmhos)		2 05	0	90.00	97.40	ò	1										
Port Run   Valve   Container   Colored   Valve   Shoe   Arm   Deadvate   Arm   Pressure   Shoe   Container   Colored   In   In   Locate Port   Will   Standard   Container   Colored   In   In   Locate Port   Will   Standard   In   In   Standard   In   In   In   In   In   In   In   I	Paramete	Temp. (oC)	200	22.87	06 36	23.96	23.2	25.37											
Port Run   Valve   Container   Colored   Valve   Shoe   Arm   Deadvate   Arm   Pressure   Shoe   Container   Colored   In   In   Locate Port   Will   Standard   Container   Colored   In   In   Locate Port   Will   Standard   In   In   Standard   In   In   In   In   In   In   In   I	er Quality	Turb. (NTU)	11 1	-	100	2 0/0	20.05	2.13											
Port Run   Valve   Container   Colored   Valve   Shoe   Arm   Deadvate   Arm   Pressure   Shoe   Container   Colored   In   In   Locate Port   Will   Standard   Container   Colored   In   In   Locate Port   Will   Standard   In   In   Standard   In   In   In   In   In   In   In   I	Wate	H. H.	1 5	27.6	2	0.0	6	6.3	_	L			L	$\downarrow$	1			ļ	$\prod$
Port Run   Valve   Container   Colored   Valve   Shoe   Arm   Deadvate   Arm   Pressure   Shoe   Container   Colored   In   In   Locate Port   Will   Standard   Container   Colored   In   In   Locate Port   Will   Standard   In   In   Standard   In   In   In   In   In   In   In   I	ļ			600		200	8	12	_			_					_		$\coprod$
Port Run		Pressure in MP	140	1/0.3	1 5	15.0%	800	32.7											
Position   Position   Sample   Position   Sample   Position   Po				7	<u>  </u>	7	7	7				L				L			
Position  **Run   Vacuum   Wacuum   Walve   Check   Valve   Check   Valve   Check   Valve   Check   Check   Valve   Check   Check   Valve   Check   Check   Valve   Check   C	ks	Close	}	7 7		7	7	7											
Position  **Run   Vacuum   Wacuum   Walve   Check   Valve   Check   Valve   Check   Valve   Check   Check   Valve   Check   Check   Valve   Check   Check   Valve   Check   C	ction Chec	Zone	20001	14.92	10/ 9<	188.88	109.87	55.407							0				
Position  **Run   Vacuum   Wacuum   Walve   Check   Valve   Check   Valve   Check   Valve   Check   Check   Valve   Check   Check   Valve   Check   Check   Valve   Check   C	le Colle	Open Valve	77		1/	7	/	7					1		٥				$\ $
Port Run # Shoe Check Yalve Evacuate Valve Shoe Arm Deactivate Arm Pressure Closed in In Locate Port In MP Pressure Closed in Container Closed in	Samp	Zone	178.27	14.63	15.5c	169.86	109.84	14.52					7		K				
Port Run Vacuum   Wacuum   Wacuum   Wacuum   Wacuum   Walve   Evacuate   Valve   Evacuate   Valve   Shoe   Arm   Deadrivate   Arm   Closed   In   In   Locate Port   Out   Valve   Open   Container   Closed   In   In   Locate Port   Out   Closed   In   In   In   Closed   In   In   In   In   In   In   In   I		Shoe	77	7	7	7	7	7					1		7				
Port Run Wacuum Harbon Checks Shoe Arm Seampler Sampler Closed out Valve Open Container Closed in In Locate Port Out Valve Open Container Closed in In Locate Port Out Valve Open Container Closed in Closed Open Container		Pressure in MP	7	109.49	200	78.04	18.00	32.78		,									
Port Run Vacuum   Vacuum   Wacuum   Wacuum   Valve   Check   Valve   Container   Closed   In   In   Closed   In   Cl		Arm	7 .	[2]	7/	7	7	7											
Port Run Vacuum   Vacuum   Wacuum   Wacuum   Valve   Check   Valve   Container   Closed   In   In   Closed   In   Cl	Position Sampler	Deactivate Set Arm Locate Port	7 6	7	143	7	7	7											
Port Run # Shoe Check Valve Evacuate Valve Closed Out Valve Open Container Closed Clos			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	3	18	7	7	7	$\parallel$										$\dagger$
Port Run Vacuum Wacuum Wacuum Wacuum Wacuum Out Valve Open Container Closed Open Closed		Shoe in	7 .5	1		7	7	1										7	1
Port Run   Shoe   Check   Out   Vacuum   #   Shoe   Check   Out   Valve   Check   Out   Valve   Check   Out    ecks	Valve Closed	7 0	7	1 12	1	7	7	$\ $											
Port Run   Shoe   Check   Out   Vacuum   #   Shoe   Check   Out   Valve   Check   Out   Valve   Check   Out    unction C	Evacuate	7 4	7	1.7	7	7	7												
Port Run # Shoe Check # Shoe Check # Wacuum # #	urface	Valve Open	1 3	7 7		7	7	7										1	
# # # # # # # # # # # # # # # #			7	9	3	/	7	7										7	
P# 182 Luuuy 44			1 2	77	.[/	Z	7	7		]								1	
		# #	1	-6	14		1	$\frac{1}{4}$											
2× 6 V		P #	87	W/u	14	4	4	1/											
A · · · · · · · · · · · · · · · · · · ·			•	À		\$ 7 m	<i>,</i> "	<b>4</b>											

Total Volume:

Notes: Pot 3: Clien & Odigles

clear + Ochoules



Multi-Port Well Field Data Sheet

Well ID: MW-14

Sampling Zone No.: 5/4 Depth (ft): 320 End of Session: Beginning of Session:

Water Pressure Inside Casing:

Contract #: N68711-01-D-6008

JPL Pasadena

Delivery Order #: 0001

(O

Start Time: //// Finish Time: /2/9

Date: 8.7.03 Page: 1061

		¥	ર																			
٩	Cond (mmhos)		7:57	,	55.70																	
Water Quality Parameters	Temp.		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		25.47				1					1				<u> </u>	†		+	
Ouality	Turb. (NTU)	12/0/2 20 20 20 20 20 20 20 20 20 20 20 20 20	1	MONDE COS	200			Ī	1					T	1					†	1	
Water	H	7	?	١٥	3.							_					_		T		$\dagger$	٦
	Time	121	7	30			į													!		
	Pressure in MP	1,4		A 2 - 1	0.10																-	
	Shoe	\	7 ,	3	7																	
ks	Close	!	2   2   2	3	4																	
Sample Collection Checks	Zone Pressure	36 WI	, , ,	2/17	1																	
le Colle	Open Valve	7	7	7						V			1									
Samp	Zone Open Pressure Valve	177.60	128.24	17:17							V			0	\ \							
	Shoe	1	1	7			\				1	1		C	K	,						7
	Pressure in MP	146.87	10%. %	101.1								7	1	-							#	
	Arm	1	7	7										\							I	1
Position Sampler	Deactivate Set Arm Locate Port	7	7														1		\			
	Arm	7	7														1				V	
	Shoe	7	7																			
hecks	Valve	7	7																			
Surface Function Checks	Valve Evacuate Valve Open Container Closed	7	7																			
urface	Valve	7	7									Ī										1
S	Vacuum Check Valve Closed	7	7																			
	Shoe Out	7	7	1	Ī	Ţ	]						1				T	†				
	t Run #		_	1	$\prod$								Ţ									
·	Port #	7	7	2	-				_								L					

Notes: Port S: Clear 10 doubles



Contract #: N68711-01-D-6008

JPL Pasadena

# **Groundwater Sampling**

Multi-Port Well Field Data Sheet

Well ID:  $H\omega - I$ 

Depth (ft): 524/429, /3/5/ Sampling Zone No.:

Date: 8.7.03

Start Time: 0920Finish Time: 0851

122.02 67345.34 0.90 19,02 25.50 02.58 25.61 0.58 17.2080 80.28 14.23 0849 6.330,45 20.19 47.50 (mmhos) Cond Water Quality Parameters Temp. (oC) Turb. (NTU) 표 Time Pressure in MP Shoe 드 Close Salve Sample Collection Checks Zone Open Zone Pressure Valve Pressure 142.38 185.34 26.72 32.00 185.53 142.58 31.99 30.78 0 4.8 Shoe Ont End of Session: Pressure 14.20 Beginning of Session: 121.89 82.04 14.24 in MP Arm ont Locate Port Deactivate Position Set Arm Sampler Arm 드 Shoe .⊑ Valve Open Container Closed Surface Function Checks Valve Evacuate Water Pressure Inside Casing: 1 7 Delivery Order #: 0001 Check Valve Vacuum Closed 7

7

M

Shoe ont

Port Run #

o.

Notes: 1044: Clar 1 Octobers Pok

Pat 3: braining willow + adollers



Multi-Port Well Field Data Sheet

Well ID: كا - 24 Sampling Zone No.: الم 2/ ع/ عراط Depth (ft): كالم الم

Beginning of Session: \_ End of Session: \_

Water Pressure Inside Casing:

Contract #: N68711-01-D-6008 Delivery Order #: 0001

JPL Pasadena

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rt Time: 076 / Date	Finish Time: 1054 Pag
(	277 Finish T

		74	· M	, N	~	10.60	7														
S	Cond (mmhos)	(	200	39.50	19.0														ì		
Water Quality Parameters	Temp.	1000	C2 57 62 56 02 14.16 001 45.80	35.09 1024 7.316.10 2553 39.50	26.97						1	T			1						1
Quality	Turb. (NTU)	1	2.90	0/3	4.90																
Water	표	366	12.0	7.37	7.10							1	1	1			1	1	T		T
	Time	1947	8	15201	1046 7,16 4.90								1								1
	Pressure in MP	14.07	42.20	35.09	14.24																
	Shoe	7	7	7	7							t	1				t		+		-
s	Close	7	7	7	7											^				T	
Sample Collection Checks	Zone	80.891	175.01	11.92	S2.M			\								6					
Collect	Open Valve	7	7	7	7				1				†	<u> </u>	T	6	+		T	-	$\parallel$
Sample	Zone	68.72	118.39	91.92	25.81									1	1						
	Shoe	7	7	>	7								r	1	t						
	Pressure in MP	114.12	12.20	35.07	14.23																
	Arm	1	7	7	7	$\parallel$	1			-	-				$\dagger$	$\vdash$	I				
Position Sampler	Deactivate Set Arm Locate Port	7	7	1	7																
	Arm	7	7	7	7	$\parallel$	+							$\dagger$							H
	Shoe	Z	7	1	1																1
ecks	Valve Closed	7	1	1	7																
Surface Function Checks	Valve Evacuate Valve Open Container Closed	7	7	1	7																
urface	Valve Open	7	7	7	7																
CO	Vacuum Check Valve Closed	7	7	7	7																
	Shoe	7	7	7	7																
	Port Run ##		1	$\int$	-																
	Port	4	Ŋ	1)	1																

Total Volume:

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JPL Pasadena

Contract #: N68711-01-D-6008 Delivery Order #: 0001

Water Pressure Inside Casing:

Multi-Port Well Field Data Sheet **Groundwater Sampling** 

Well ID: HW - 2 2 Sampling Zone No.:

Depth (ft): Beginning of Session: \_\_\_\_\_End of Session: \_\_\_\_\_

8/11/8 Date: 8//// Page: 79

Start Time: 072/ Finish Time: 09/5

			M	·		_	/	4	\	7	50	; \ 5	<u>_</u>						
ers	Cond (mmhos)		51.8	20.6 47.80	1				47.20	4.66		اه.							
Paramete	Temp. (oC)		21.19	20.6					21.44 47.20	81.18									
Water Quality Parameters	Turb. (NTU)		0.70		ш				0840 6.23 4.80										
Water	됩	3	5.42	36.9			Ц		6.23	12.9							<u>.</u>		1
	Time	to acrouse	673	000			₹	4	0840	07/1								_	
	Pressure in MP	TOWN S PROJECT NAMES	115.01 6738542	89.9 00006.43	Link Aplain	\$ C.	A 100 C	9	189.70 0810	53.24 0811 6.24 8.40									
	Shoe	Y E	1	7		1			1	7									
မြ	Close Valve	3	7	7	and the second	+ 00	18	15	7	1					7	I			
Sample Collection Checks	Zone	3	10.2×	84.24	なんな	Ĉ.	Selver in the	150	84.27	48.27				\	0.//				
e Colle	Open Valve	7	7	1	PVANT		0		7	7				W	<b>©</b>				П
Sampl	Zone	138.24	180.2	87.23	20.78	CAN CAN		90, 8-	84.73	48.22	1			1					
	Shoe	7	7	7	7	7	7	7	7	7									
	Pressure in MP	116.34	/C. @b	28.61	80.0%	90.80	87.82	288	98.80	53. 23									
	Arm	7		7	7	1	1	1	7	7									l
Position Sampler	Deactivate Set Arm Locate Port	7		7	7					7									N
	Arm	7		7	7	+		$\parallel$		1									
	Shoe	/		/	7					7									
necks	Valve	7		/	1					7									
Surface Function Checks	Valve Evacuate Valve Open Container Closed	7		7	7					7									
urface	Valve Open	7		7	7					7									
o,	Vacuum Check Valve Closed	7		1	7					7									
	Shoe Out	7		1	7					7									
	Port Run # #		4	$\dashv$	7	2	2	12	8	$\exists$							_		
	Por #	W.	W	7	1	И	7	0)	2	J	1								

Total Volume:

Notes: POX 3: Claen & collapse



Multi-Port Well Field Data Sheet

Well ID: Hw -12 Sampling Zone No.:

Water Pressure Inside Casing:

**JPL Pasadena** Contract #: N68711-01-D-6008

Delivery Order #: 0001

Date: 8 - 11 - 03
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Zone No.:  $\frac{S/H/S/2}{S/4/S6/S2S}/\frac{243}{24/4}/4$  Start Time:  $\frac{0948}{1200}$ 02 1/ Beginning of Session: \_\_\_\_\_\_\_\_End of Session: \_\_\_\_\_\_\_

		V5	ζ.	M	2	\ \	3	.\									
စ်	Cond (mmhos)	43.10	16.40	29.20	C. 6.18	2/5, 1,3	ر	. c.	6								
Water Quality Parameters	Temp. (oC)	2.3.1/ 1/00 6.00 24.09 43.10	155.3410:327.70 9.40 26.05 46.40	64.31	24. 25E	18.50	${}^{\dagger}$			:							
Quality	Turb. (NTU)	00.7	9.40	9.0	65. 6	36.6											
Water	F	26.3	2.2	2-4	25.6	2.6											
	Time	(2)	70:33	1059	1/20	15 //											
	Shoe Pressure In in MP	1.5.2	155.34	125.53	10.65 1120 139 6:33 W. 25 4.40	36.0 2.0 1411 51.05						1					
:		7	7	7	7	7											
sk s	Close Valve	7	7	7	7	7	1										
Sample Collection Checks	Zone Pressure	20702	159.88	11.45	81-CL	35.04											
ole Colle	Open Valve	7	7	7	7	7											
Samp	Zone Open Pressure Valve	2. 00%	189.94	85.111	41.66	76.X											
	Shoe Out	7	7	7	7	7			•								
	Pressure in MP	203.72	154.73	105.43	55.06	60.72											
	Arm	7	Ź	7	7	7											
Position Sampler	Deactivate Set Arm Locate Port	/	7	7	7	1											
	Arm In	7	7	7	7	1											
	Shoe	7	1	7	1	7											
hecks	Valve Closed	7	7	7	7	7											
Surface Function Checks	Valve Evacuate Valve Open Container Closed	7	7	7	7	7									·		
urface	Valve Open	7	7	7	7.	7											
"	Vacuum Check Valve Closed	7	7	7	7	7											
	Shoe Out	7	7	1	7	7		£	1								$\begin{bmatrix} \ \end{bmatrix}$
	Run #	~	_	_	3												
	Port #	5	7	Μ	7	~	•										
		- KI	×														

Porty: Clac + odolline

Total Volume:

October odoules

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